

# Could the Hyperloop Really Cost \$6 Billion? Critics Say No

By Nick Bilton

August 15, 2013 6:23 pm

Elon Musk, a serial entrepreneur who was a co-founder of PayPal and the electric car company Tesla Motors, sent people in California into a tizzy on Monday when he released a white paper outlining a hypothetical high-speed transportation system called the Hyperloop.

There were a number of curious questions about the Hyperloop, which Mr. Musk's white paper claims will be able to travel at up to 800 miles an hour and transport people from San Francisco to Los Angeles in 30 minutes. While physicists agree that technically, on paper, this is possible, economists seem to agree that technically, on paper, the price tag of \$6 billion is impossible.

Richard White, a professor of American history at Stanford and author of "Railroaded: The Transcontinentals and the Making of Modern America," said Mr. Musk's project was "dramatically overblown and the price is drastically underestimated." He said in an interview that Mr. Musk's document outlining the price of the project was "just pie in the sky."

Just how pie in the sky is it?

Alexis Madrigal, a senior editor at The Atlantic, points out that one reason California's high-speed rail project has been projected to cost \$68 billion is that "they have to acquire 1,100 different pieces of land."

“Just Fresno to Bakersfield, a little over 100 miles, is supposed to cost \$7 billion for high-speed rail,” he writes.

Although Mr. Musk has stated that he would save money on land parcels by setting up pylons for the Hyperloop along Interstate 5 in California, he isn’t taking into account the legal hurdles the currently planned, high-speed train had to go through just to acquire land.

As Brad Plumer of The Washington Post noted, one of the major factors for the California high-speed rail price’s ballooning to 10 times Mr. Musk’s projected price is that local communities along the train route demanded extra viaducts and tunnels. “Other towns, meanwhile, have insisted they not be bypassed even in cases where it would be cheaper to do so,” Mr. Plumer wrote.

The 400-mile Hyperloop would not be immune to these issues.

Putting aside the cost of construction, critics said the projected cost for people to use the Hyperloop was impossible, too.

Mr. Musk projected that the Hyperloop would be able to transport 840 people an hour, each paying \$20 a ticket. But as Dan Sperling, founding director of the Institute of Transportation Studies at the University of California, Davis, said: “There’s no way the economics on that would ever work out.”

Mr. Sperling told Al Jazeera that when you factor in capital, labor and maintenance of the Hyperloop, the numbers, “even in the most outlandish visionary way, do not make any sense at all.”

“The whole technology is unproven,” he said. “I know he’s a brilliant guy, but it just doesn’t pencil out.”

Michael L. Anderson, an associate professor of agricultural and resource economics at the University of California, Berkeley, predicted that the cost of the entire project would be closer to \$100 billion.

No one seems to be arguing whether it is possible, or even if Mr. Musk could

technically build the Hyperloop — this is, after all, the man who created Tesla and SpaceX — experts seem to be focused on how he plans to build this invention, then operate it, at the costs he proposes.

“People laud him for creating Tesla,” said Mr. White of Stanford. “But let’s be realistic; he’s not Henry Ford creating the Model T. Musk is creating \$60,000 to \$100,000 electric cars for rich people.”

A version of this article appears in print on 08/19/2013, on page B4 of the NewYork edition with the headline: Questioning The Feasibility Of Hyperloop.

---

© 2014 The New York Times Company